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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,970	05/20/2004	Ernst Friedrich Ach	16755	8636

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EXAMINER

MATTHEWS, TERRELL HOWARD

ART UNIT	PAPER NUMBER
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3654

DATE MAILED: 12/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

10/849,970

Applicant(s)

ACH, ERNST FRIEDRIC

Examiner

Terrell H. Matthews

Art Unit

3654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-14 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

FINAL REJECTION

Applicant's arguments filed 9/28/2006 have been fully considered but they are not persuasive for reasons as detailed below.

The prior art rejections have been maintained or modified as follows:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,4-8, 10-11,13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baranda (WO 99/43589) in view of Kinoshita (US-5891561) in further view of Danhauer (US 2002/0098935).

Referring to claims 1,4-6. Baranda discloses an "Elevator System Having Drive Motor Located Between Elevator Car and Hoistway Sidewall" as claimed. See Figs. 1-8 and respective portions of the specification. Baranda further discloses a drive motor (42) mounted at a head of an elevator shaft and having a drive pulley; an elevator car (16) movable in the elevator shaft; a counterweight (48) movable in the elevator shaft and arranged laterally of the elevator car (See Pg. 2 – Pg. 3 l. 17 & Fig. 2). Baranda further discloses a flat-belt-like support means supporting

Art Unit: 3654

the elevator car by under looping and engaging the drive pulley, Baranda does not disclose the support means being a wedge-ribbed belt having a running surface facing the drive pulley and a plurality of ribs and grooves formed with an angle in the range of 80 to 100 degrees in the running surface and extending in parallel in a longitudinal direction of the support means.

Kinoshita discloses a "Power Transmission Belt With Load Carrying Cord". See Figs. 1- 3 and respective portions of the specification. Kinoshita further discloses a wedge-ribbed belt (10) with ribs and grooves being one of triangular-shaped and trapezium-shaped in cross section (See at least Col. 3 l. 12-30 and at least Fig. 1). Danhauer discloses a belt (10) with a plurality of ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction on the support means (See Sect. 0017 & Figs. 1-2). Furthermore, Danhauer discloses that the belt (10) is provided with a plurality of transverse grooves (34) (See Sect. 0025) and that the grooves are provided at an inclined angle. Additionally, it should be noted that the belt (10) has at least two wedge-ribbed belt strands arranged in parallel (See Figs. 1-2). It would have been obvious to a person of ordinary skill in the art to modify the apparatus of Baranda to include the teachings of Danhauer and provide a wedge-ribbed belt with a plurality of ribs and grooves formed in the running surface as well as transverse grooves and ribbed strands formed at an inclined angle as taught by Kinoshita and Danhauer so that the belt could provide better traction, increased flexibility, running quietness, and a higher load capacity.

Referring to claim 7. Baranda does not disclose that the drive pulley has an external diameter in a range of 70 to 100 millimeters. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda to include drive

pulleys that were in the range of 70 to 100 millimeters so that greater torque and lifting capacity could be achieved.

Referring to claim 8. Baranda discloses that the car guide rail (60,64) is mounted on two opposite sides of the elevator car and two counterweight guide rails (62,66) mounted on a counterweight side of the elevator car and the drive motor with the drive pulley being mounted on a motor carrier (36) attached to one of the car guide rails and to the two counterweight guide rails (See Pg. 4 – Pg 5 l. 23 & Figs. 1-2).

Referring to claim 10. Baranda discloses an elevator wherein said drive motor and said drive pulley are mounted above a space in the elevator shaft taken up by said elevator car, a plane of said drive pulley being arranged vertically and at right angles to a car wall at a counterweight side of said elevator car and approximately in a middle of a car depth of said elevator car, a vertical projection of said drive pulley onto said counterweight side of said elevator car being outside a vertical projection of said counterweight side, and a part of a vertical projection of said drive motor being superimposed on said vertical projection of said counterweight side of said elevator car (See Figs. 1-2).

Referring to claims 11,13-14. Baranda discloses an elevator system wherein the belt extends from a support means fixing point below said drive pulley and in a region of a vertical projection of said drive pulley, downwardly to a side, which faces said elevator car of a periphery of a counterweight support roller, loops around said counterweight support roller, extends to a side remote from said elevator car of a periphery of said drive pulley, loops around said drive pulley and runs downwardly along a car wall at a counterweight side of said elevator car, loops by 90 around a respective car support roller mounted below said elevator car on each

Art Unit: 3654

of two sides of said elevator car and runs along a car wall remote from said counterweight upwardly to a second support means fixing point in the elevator shaft. Baranda further discloses an elevator system having a drive motor mounted at the head of the elevator shaft and having a drive pulley for engaging the support, comprising a belt adapted to support the elevator car by underlooping and engaging the drive pulley. Baranda does not disclose that the belt is wedge-ribbed belt that has a running surface adapted to face the drive pulley and a plurality of substantially triangular-shaped and trapezium shaped ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction of the belt. Danhauer discloses the belt is a wedge-ribbed belt that has a running surface adapted to face the drive pulley and a plurality of ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction of the belt (See at least Fig. 1). Furthermore, Danhauer discloses that the belt (10) is provided with a plurality of transverse grooves (34) (See Sect. 0025) and that the grooves are provided at an inclined angle. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus to include a belt as taught by Danhauer and Kinoshita so that greater traction and running quietness could be achieved as well as a higher load capacity.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baranda in view of Danhauer as applied to claims 1,4-8, 10-11,13-14 as advanced above and in further view of Faletto (6471012).

Referring to claim 9. Baranda does not disclose a brake unit mounted on the motor carrier for acting upon the drive pulley. Faletto discloses a "Pulley System For A Traction Sheave

Art Unit: 3654

Elevator” as claimed. See Figs. 1-2 and respective portions of the specification. Faletto further discloses a brake acting on a drive pulley to prevent rope movement. Faletto further discloses that the brake could be positioned to act on the rope, on a pulley mounted on the elevator car, or on an auxiliary pulley (See Col. 5 l. 9-14). It should be noted that it is generally known in the field of art to provide a brake to act on the drive pulley to prevent movement. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda to include a brake unit to act on the drive pulley to prevent movement in order to slow and stabilize the elevator car.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baranda in view of Danhauer as applied to claims 1,4-8, 10-11,13-14 as advanced above and in further view of Saito (US-5025893)

Referring to claim 12. Baranda does not disclose that the guide roller mounted at the bottom of the elevator car and engaging the wedge-ribbed belt, in which the guide roller has a plurality of ribs and grooves engaging the ribs and grooves of the wedge-ribbed belt for guidance of the wedge-ribbed belt. Saito discloses a “Vibration Suppressing Device For Elevator”. See Figs. 1- 5 and respective portions of the specification. Saito further discloses guide rollers (11,12) having a plurality of ribs and grooves for engaging the ribs and grooves of the rope for guidance of the rope (See at least Col. 2 l. 45 – 66, Col. 3 l. 25 – 30 & at least Figs. 4-5). It would have been obvious to a person of ordinary skill in the art at the time of the invention in view of Saito to modify the apparatus of Baranda to include guide rollers that had a plurality of

ribs and grooves that engaged the ribs and grooves of the belt so that a elevator could receive greater traction and a higher load capacity.

Response to Arguments

Applicant's arguments that the prior art fails to teach the claimed features are unconvincing. In particular, Applicants focus on "grooves being formed with lateral flanks at an angle in a range between 80 to 100" is unpersuasive. Danhauer teaches that it is known in the art to provide grooves with lateral flanks formed at an inclined angle. It would have been obvious to one having ordinary skill in the art at the time of the invention to provide the grooves formed with lateral flanks at an angle in a range of 80 to 100, since it has been held that the provision of adjustability, where needed, involves only routine skill in the art to which it would have been obvious to do so in order to increase traction capability, running quietness, and load capacity. Consequently, as a review of the prior art undermines Applicant's arguments, the claims stand rejected.

Examiner has maintained the prior art rejections, statutory rejections and drawing objections as previously stated and as modified above. Applicants' amendment necessitated any new grounds of rejection present in this Office action. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 3654

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Heinz (US-2003/0121729) discloses a "Lift Belt System" comprising a belt with grooves being one of triangular-shaped and trapezium-shaped in cross section and being formed with lateral flanks at an angle.

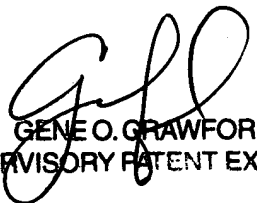
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrell H. Matthews whose telephone number is (571)272-5929. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3654

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

THM


GENE O. GRAWFORD
SUPERVISORY PATENT EXAMINER